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REPORT

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COUNTRY Hungary

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SUBJECT Grinding Wheel Factories

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THIS IS UNEVALUATED INFORMATION

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1. three grinding wheel factories in Budapest:
 - 25X1 a. The Granite Grinding Wheel and Flintware Factory (Granit Csiszolokorong es Koesedenygyar)
 - b. The Solus Grinding Wheel Factory (Solus Csiszolokoronggyar)
 - e. The Videnta Grinding Wheel Factory (Videnta Csiszolokoronggyar)
2. Until January 1952 grinding wheel factories were under the control of the Glass and Fine Ceramics Division (Uveg es Finom Keramiai Focosztaly) of the Ministry for Light Industry (Koenyueipari Miniszterium). As a result of the reorganization of this Ministry, the Glass and Fine Ceramics Division came under the newly created Ministry for Construction (Epitesi Miniszterium).
3. Production and technical development of the grinding wheel factories came under the direction of the Production Department and Technical Section respectively of the Glass and Fine Ceramics Division of the new Ministry for Construction.
4. Procurement, transportation, and distribution of materials were under the direction of the Materials and Goods Distribution Department of the Glass and Fine Ceramics Division of the Ministry. Director of this Department was Miksa KURCS, who was about 55 years old, tall, slender, slightly bald, and blue-eyed. he had been director of the Granite Factory before World War II and that he was a recognized expert in this field.

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5. The Enterprise for Sales of Technical Products (Mueszakiarut Ertekesito Vallalat - MUEART), with offices located at Budapest V, Bajosi Zsilinski ut. 60 or 70, was in charge of finished grinding wheels, and coordinated all orders, sales, and distribution. All enterprises using grinding wheels submitted their specific orders to MUEART, which coordinated them and forwarded them to the grinding wheel factories. The actual sale and transportation of grinding wheels was carried out by individual sales organs for internal trade. MUEART was in direct contact with the State Planning Office, which was thus in a position to know the exact demand for grinding wheels and current production figures. MUEART maintained a grinding wheel storehouse, the exact address of which I do not remember. [redacted] The storehouse, in the ground floor of a building and covering an area 40 x 30 m., was practically empty because the demand for grinding wheels was so great that they were taken right from the factories by trucks of the various industrial enterprises which used them. Nevertheless, all the accounting was done by MUEART. The grinding wheel factories debited MUEART for all the wheels delivered and MUEART debited the individual enterprises.

The Granite Grinding Wheel and Flintware Factory

6. An expert of long standing in his field, Gyula AJTAY,¹ was director of the Granite Grinding Wheel and Flintware Factory. He was about 53 years old, about 5'6" tall, with a round face, dark hair, and black eyes. AJTAY had spent a number of years in several Western countries and before World War II he was employed in this same factory, which then belonged to the STIEBER family. [redacted] AJTAY was dismissed from his post in 1948 because of his political views and connections with the West, but he was reemployed in 1950. [redacted] [redacted] he hated the Communist regime. It was AJTAY who in 1951 tested the first wheels made of artificial corundum (second-grade grains) in the Magyarovar Artificial Corundum Factory. [redacted]
7. The Granite Factory occupied an area 150 x 300 m. at Csurgoi utca 28, Budapest XI, I believe. Near the factory there were several two-story buildings constructed before World War II which served as workers' quarters. The equipment of the factory was adequate and up-to-date and included a newly-built firing furnace, sliding tunnel type, about 50 m. long, completed at the beginning of 1951 by Italian and French furnace builders at a cost of 50 million forints. The factory had about 600 employees working in three shifts.
8. Grinding wheel grains were classified according to the size of the grains. Silicon carbide grains formerly imported from West Germany were shiny green. The grains imported from East Germany were dull and smoky gray. The imported fine corundum grains were marble white and pink. The domestic aluminum oxide grains were generally dark gray.
9. The production method was simple. It consisted of mixing the grains with binding material and adding water and necessary chemicals. This mass was shaped into the required diameter and thickness and placed in the molds of pressing machines. The wheels made with ceramic binding material were used for machines which turned with a velocity of more than 2,000 m. per second. In order to resist the stress of centrifugal energy, these wheels were enclosed in steel rings. The loaded grinding wheels, after being formed, were placed on sliding chests and embedded in pure quartz imported from Czechoslovakia. The quartz was white and consisted of small grains about one millimeter in diameter. The sliding chests were pushed into the furnace gradually. The heat in the furnace was controlled by so-called Sieger candles placed in the firing area, which withstood a

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temperature up to 2,000 degrees C. It took 24 hours for each chest to pass through the 50 m. - long furnace tunnel. After firing, the grinding wheels were centered. It was very important to have the hole in the exact center of the wheel.

10. Wheels made with Bakelite as binding material were not dried in the tunnel because the heat would ruin the Bakelite. Bakelite binding material could not withstand a temperature exceeding 200 degrees C. Therefore, the drying of these wheels lasted for as long as two or three weeks.
11. All finished wheels were subjected to a centrifugal test. This was done in a special testing laboratory to which all wheels produced in the factory had to be sent. The wheels were placed in strong steel boxes on axles and made to rotate at a maximum speed which was 20% higher than the speed required for normal operation. After the test, the letter "P" was printed near the center of the wheel to show that it had been tested. In addition, a paper label also was attached near the center of the wheel giving the following information:
 - a. Size of grain
 - b. Name of binding material
 - c. Quality of wheel material
 - d. Diameter and thickness of wheel
 - e. Maximum speed per minute
12. The Granite Grinding Wheel Factory produced the largest grinding wheels in Hungary, except for wheels produced experimentally. They ranged from 300 to 600 mm. in diameter, from 40 to 80 mm. in thickness, and weighed up to 25 kgs. The binding materials used were ceramics and, to a lesser extent, Bakelite. Three kinds of grinding wheels were produced:
 - a. Silicon carbide grain wheels
 - b. Second-grade normal corundum grain wheels
 - c. First-grade fine corundum wheels
13. In addition to the above-mentioned grinding wheels, the Granite Factory also manufactured water grinding wheels made with cold binding material. These wheels were used in agriculture for grinding axes, spades, and other agricultural implements, and they were especially needed at the Salgotarjan Steel Products Factory (Salgotarjani Acelarugyar) and the Rakosi Matyas Works (Rakosi Matyas Muevek). In addition, for six or eight of its machine units the Salgotarjan Factory used giant wheels up to two meters in diameter. These wheels were imported from West Germany up to October 1951. This factory was in such great need of large grinding wheels that an attempt was made to use domestic stone, but the trial was unsuccessful because the domestic product did not last even one-tenth as long as the imported product. AJTAY experimented also in the production of large diameter wheels but, because of the lack of steel mold chests, by April 1952 only a few wheels 900 mm. in diameter had been made, which was quite insufficient for the needs of the industry.
14. The flintware section of the Granite Factory produced plates, cups, vases, and ash trays. These objects, after being formed and fired, were hand-painted and glazed. The decorating was done by expert

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25X1 industrial artists. [] these products were exported mostly to South America. A hand-painted vase sold for as much as 25 US dollars. About 200 of the 600 employees worked in this section.

The Solus Grinding Wheel Factory

15. This factory, located in Koebanya, Budapest, was about one-fourth the size of the Granite Factory. Its equipment was obsolete. []
25X1 [] The production methods
25X1 otherwise were similar to those of the Granite Factory. It produced grinding wheels from 200 to 300 mm. in diameter, and weighing up to 15 kgs. but customers complained about the poor quality of these wheels. This factory also produced grinding discs used in machine tools. The director of the factory was a common laborer before he was placed in charge, and that may account for the general confusion and poor quality of the production there. The plant worked in three shifts and employed about 300 workers.

The Videnta Grinding Wheel Factory

16. []
25X1 [] the grinding wheels produced there were very small in
25X1 diameter and were used in the tool industry. Fine dentist grinding
25X1 discs also were produced there. The plant operated in three shifts and employed about 100 workers.

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